Section 4: **Additional Precaution**

Policy number: **4.5**

Subject: **Additional Precautions: Airborne Precautions**

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1 PURPOSE

1.1 Airborne Precautions are used in addition to Routine Practices for clients known or suspected of having an illness transmitted by the airborne route. Airborne transmission occurs when airborne particles remain suspended in the air, travel on air currents and are inhaled by others who are nearby or who may be some distance away from the source client, in a different room, or in the same room that a client has left, if there have been insufficient air exchanges. Control of airborne transmission requires control of air flow through special ventilation systems and the use of respirators. Microorganisms transmitted by the airborne route are *Mycobacterium tuberculosis* (TB), varicella virus (chickenpox virus and disseminated shingles) and measles virus.

2 POLICY

2.1 Staff must use Airborne Precautions in addition to Routine Practices for clients known or suspected to have an infection that can be transmitted by small particles suspended in the air and inhaled by others. Staff must maintain a high degree of suspicion for those who present with compatible symptoms of an airborne infection.

2.2 Personal Protective equipment (PPE) for airborne precautions requires the use of an N95 fit tested respirator and eye protection for contact with the client. Dependent on the risks, and in accordance with risk assessment for Routine Practices, other PPE may be required. Engineering controls such as negative pressure accommodation is required for long term accommodation of someone requiring airborne precautions.

3 PROCEDURE

3.1 Airborne Transmission

3.1.1 Occurs when small particles carrying an infectious agent exit the respiratory tract of a person and are inhaled by others

3.1.2 Particles can be generated when client talks, coughs, sneezes, sings etc.

3.1.3 Particles can be generated through some procedures performed on the respiratory tract to a person with undiagnosed tuberculosis (TB) such as bronchoscopy or sputum induction

3.1.4 Refer to Appendix 39: Conditions/Clinical Presentations and Specific Etiologies Requiring Airborne Precautions. Other microorganisms transmitted by the airborne route are referred to in Appendix 36: Tuberculosis Fact Sheet; Appendix 37: Chickenpox Fact Sheet.

3.1.5 Refer to FNIHB-OR Respiratory Protection Plan for further information.

3.2 NOTE: Influenza Pandemic

3.2.1 The Ontario Health Plan for an Influenza Pandemic (2013) indicates: Although N95 respirators are not routinely required for seasonal influenza, in keeping with the precautionary principle, they may be recommended for use during an influenza pandemic and for aerosol-generating procedures (see below).

3.3 Aerosol Generating Medical Procedures

3.3.1 The following diseases may also be transmitted from human to human by the airborne route during aerosol-generating medical procedures (e.g. intubation, open airway suction, cardio-pulmonary resuscitation, bronchoscopy);

3.3.1.1 Emerging respiratory infections

3.3.2 Any piece of equipment used in the oral cavity (because of the presence of saliva and/or blood and/or debris) powered by compressed air, such as hand pieces, cavitron, prophy jet, air water syringe, will cause droplets/aerosol. Clinician and chairside assistant require protection.

3.4 Controls for Preventing the Transmission of Airborne Infections

3.4.1 Immunity against measles and varicella for HCP and all staff

3.4.2 Early identification of potential cases

3.4.3 Prompt referral to a facility with an airborne infection isolation room

3.4.4 Appropriate treatment of client where applicable

3.4.5 The use of a fit-tested, seal-checked N95 respirator, when indicated

3.4.6 Identification and follow-up of exposed clients and staff (Refer to Policy 1.4: Management of Occupational Accidental Exposure to Infectious Diseases)

3.5 Airborne Precautions in a Health Facility (in addition to Routine Practices):

Refer to Appendix 35: Sample Signage for Airborne Precautions
Refer to Appendix 21: Recommended Steps for Putting On and Taking Off Personal Protective Equipment

3.5.1 Client Placement

3.5.1.1 In a clinic setting, triage client away from waiting area to an examination room with door closed and examine and transfer/discharge as soon as possible to a setting with an airborne isolation room (if available)

3.5.2 Chart Identification

3.5.2.1 Flag the client's chart appropriately indicating precautions required

3.5.3 Personal Protection Equipment (Refer to Appendix 38: Masks or N95 Respirators)

3.5.3.1 A fit-tested and seal-checked N95 respirator must be worn when entering the room, transporting or caring for a client with signs and symptoms or a diagnosis of an airborne infection. (Refer to FNIHB-OR Respiratory Protection Program)

3.5.3.2 Client should be asked to wear a procedure (surgical) mask which is effective in trapping the large infectious particles expelled by a coughing client. Client should never wear an N95 mask.

3.5.3.3 For measles and varicella, only immune staff should enter the room of the client. An N95 respirator is not required for staff known to be immune to measles and varicella.

3.5.3.4 An N95 respirator must be worn if non-immune staff are required to enter the room of a client with measles or varicella when there are no qualified immune staff available and client safety would be compromised if they did not provide care.

3.5.3.5 **Appropriate Use of N95 Respirators:** (Refer to FNIHB-OR Respiratory Protection Program for additional information)

3.5.3.5.1 Select respirator for which you have been fit-tested.

3.5.3.5.2 **NOTE**: Staff should carry a card in their wallet (or another safe and readily available place) identifying when they were fit-tested and the name and model of the N95 respirator they have been fit-tested for

3.5.3.5.3 Perform a seal-check each time a respirator is applied

3.5.3.5.4 Change respirator if wet or soiled, or more resistance to breathing is apparent for the user

3.5.3.5.5 Remove the respirator correctly and discard on removal into an appropriate receptacle. (Refer to Appendix 21: Recommended Steps for Putting On and Taking Off Personal Protective Equipment)

3.5.3.5.6 Perform hand hygiene after removing the respirator

3.5.3.5.7 Never put an N95 respirator on a client.

3.5.4 Cleaning of Equipment

3.5.4.1 As per Routine Practices (Refer to Appendix 12: PIDAC's Routine Practices Fact Sheet for All Health Care Settings)

3.5.4.2 Clean and disinfect equipment between uses

3.5.5 Environmental Cleaning

3.5.5.1 Routine cleaning (Refer to Section 7.0: Principles of Cleaning and Disinfecting Environmental Surfaces)

3.5.6 Communication

3.5.6.1 Effective communication regarding precautions must be given to clients, families, other departments, other facilities and transport services prior to transfer

3.5.7 Visitors For TB:

3.5.7.1 Household contacts should be assessed for active tuberculosis

3.5.7.2 A respirator is not required by household contacts as they have already been exposed in the household

3.5.8 For varicella and measles:

3.5.8.1 Household contacts of clients with measles or varicella are not required to wear an N95 respirator when visiting, as they will already have been exposed in the household

3.5.8.2 They should be assessed for active infection, and immunization status prior to visiting

3.5.8.3 Visitors of clients with measles or varicella who are known to be immune do not need to wear an N95 respirator to visit

3.5.8.4 Non-household contacts that are not immune should not visit.

NOTE: If both tuberculosis and a respiratory virus are suspected in a single individual, a combination of Airborne, Droplet and Contact precautions should be used. Do not reuse the N95 respirator; it must be discarded after each use.

Table 1: Summary Table of Elements That Comprise Airborne Precautions

Element	Ambulatory/Clinic Setting	Home Health Care
Accommodation	Airborne infection isolation room if available or alternate arrangements if necessary	Not applicable

Signage	Sign on door if staying for longer duration	Not applicable
N95 Respirator TB	For duration of visit	For entry to client's home
Measles, Varicella	Only immune staff to enter room. N95 respirator is not required if immune.	
Equipment and items in the environment	As per Routine Practices	
Environmental Cleaning	Routine cleaning	Routine household cleaning
Transport	Client to wear a procedure mask during transport Transport staff to wear an N95 respirator during transport	Not applicable
Communication	Effective precautions must be communicated to client families, other facilities and transport services prior to transfer	

Source: Adapted from PIDAC: Routine Practices and Additional Precautions in All Health Care Settings, November 2012. Page 41.

4 APPENDICES

Appendix 12: Public Health Ontario. (2012). PIDAC's Routine Practices Fact Sheet for all Health Care Settings.

Appendix 35: Public Health Ontario. (2012). PIDAC's Sample Signage for Entrance to Room of a Patient Requiring Airborne Precautions in all Health Care Settings.

Appendix 21: Public Health Ontario. (2012). PIDAC's Recommended Steps for Putting On and Taking Off Personal Protective Equipment.

Appendix 36: Public Health Ontario. (2011). Chickenpox Fact Sheet – Infection Prevention and Control Reference Tool.

Appendix 37: Public Health Ontario. (2011). Tuberculosis Fact Sheet – Infection Prevention and Control Reference Tool for Health Care Providers in the Community.

Appendix 38: Public Health Agency. (2013). Mask or N95 Respirator

Appendix 39: Public Health Agency of Canada. (2013). Conditions/Clinical Presentations and Specific Etiologies Requiring Airborne Precautions

5 REFERENCES

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